

Faculty Talk: Insightful Seminar Series
Faculty of Livestock, Fisheries, and Nutrition
Wayamba University of Sri Lanka

Topic	Disease suppressive soils for sustainable food crop production
Overview	
<p>The soil is the basis for more than 95% of our food: Thus, maintaining soil health is pivotal to ensure sustainability in food production. Particularly, an imbalance of soil biological health can cause substantial losses in both quantity and quality of food production. Soil biology encompasses an array of plant pests such as parasitic nematodes, disease causing pathogens and other harmful organisms apart from all other organisms that live in or interact with the soil environment. Hence, application of chemical pesticides may not only kill these pests, but also the other essential soil organisms which otherwise balance the overall soil quality and health. Therefore, converting general agricultural soil into ‘disease suppressive’ soils has become an important approach in pest and disease management in crops. Disease suppressive soils hinder the growth and activity of soil-borne pathogens/pests due to the combined competitive and antagonistic activity of the total soil microbiome.</p> <p>Among soil-borne pests, root-knot nematode is an economical pest for a range of agricultural crops including potato, carrots, tomato, guava and many others. Generally, fungal bio-agents may reduce root-knot nematode population and damage levels by 45% compared to untreated conditions. The innovative application of fungal biocontrol agents <i>Arthrobotrys</i> spp. was effective in enhancing suppressiveness of root-knot nematode in agricultural soils. This specific suppression can be enhanced further through eco-friendly cultivation techniques – use of organic amendment, reduced used of pesticides, reduced tillage etc. leading for sustainable food production systems.</p>	
Speaker	Dr. Upamali Peiris, Senior Lecturer Department of Livestock and Avian Sciences, Faculty of Livestock, Fisheries, and Nutrition, Wayamba University of Sri Lanka
	<p>Dr. Upamali Peiris earned her BSc Degree in Agriculture and Plantation Management from Wayamba University of Sri Lanka, in 2012. Then she completed her Master of Science degree in Crop Science from Postgraduate Institute of Agriculture, University of Peradeniya in 2015. She earned her PhD in Horticultural Science from Central Queensland University, Australia, in 2019.</p> <p>Her research expertise spans sustainable farming systems, biological pest control, integrated nutrient management and organic farming</p>
Moderator	Dr. W.A. Harindra Champa, Chairman, Research Development and Publication Committee, Faculty of Livestock, Fisheries and Nutrition
Date & Time	11:30 AM - 12:00 Noon on 05th March 2025
Venue	Aquaculture & Fisheries Lecture Room, Faculty of Livestock, Fisheries and Nutrition
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Organized by: Research, Development and Publication Committee
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